





**DUKE ENERGY CAROLINAS** 

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April 16, 2007

The Honorable Charles Terreni Chief Clerk and Administrator The Public Service Commission of South Carolina P. O. Drawer 11649 Columbia, South Carolina 29211

RE: S

Schedule HP-X (SC), Hourly Pricing

Docket No. 2005-48-E, Order No. 2005-475

Request to Clarify Power Factor Correction Provision

Dear Mr. Terreni:

In its Order No. 2005-475 in the above-referenced docket, the Commission approved modifications to Schedule HP-X (SC), Hourly Pricing to revise the power factor correction provision to benefit customers who operate generation in parallel with Duke Energy Carolinas, LLC ("Duke Energy Carolinas" or the "Company"). The approved change provided for the Company to calculate the power factor adjustment based on the average power factor for the billing month, rather than for each hour. As noted by the Commission in its Order, this modification benefits customers by providing the opportunity to offset hours when the power factor is below 85% with hours when the power factor is above 85%.

Duke Energy Carolinas proposes to modify the tariff language to more clearly describe the operation of the power factor adjustment calculation in order to address customer confusion regarding this provision. The term "Power Factor Charge" has also been added to the "Bill Determination" paragraph for clarity. In addition, a paragraph which referred to the Interim Load Reduction Rider has been removed. The reference had been inadvertently left in the Schedule after this Rider, approved in Docket No. 2004-250-E, expired. Ten copies of Schedule HP-X setting forth the proposed changes are enclosed.

Sincerely,

Catherine E. Heigel

Lara Simmons Nichols Associate General Counsel

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cc: Dan F. Arnett, Chief of Staff

South Carolina Office of Regulatory Staff

# SCHEDULE HP-X (SC) HOURLY PRICING FOR INCREMENTAL LOAD

# AVAILABILITY (South Carolina Only)

Available to non-residential establishments with a minimum Contract Demand of 1000 KW who qualify for service under the Company's rate schedules G, GA, I, GT, IT, OPT, or PG, at the Company's option on a voluntary basis. The maximum number of customers on the system to be served under this schedule is one hundred fifty (150).

Service under this Schedule shall be used solely by the contracting Customer in a single enterprise, located entirely on a single, contiguous premises.

This Schedule is not available for a customer who qualifies for a residential schedule, nor for auxiliary or breakdown service. Power delivered under this schedule shall not be used for resale or as a substitute for power contracted for or which may be contracted for, under any other schedule of the Company, except at the option of the Company, under special terms and conditions expressed in writing in the contract with the Customer.

The obligations of the Company in regard to supplying power are dependent upon its securing and retaining all necessary rights-of-way, privileges, franchises and permits, for the delivery of such power. The Company shall not be liable to any customer or applicant for power in the event it is delayed in, or is prevented from, furnishing the power by its failure to secure and retain such rights-of-way, rights, privileges, franchises and permits.

The Company may cancel this schedule at any time it deems necessary.

## TYPE OF SERVICE

The Company will furnish 60 Hertz service through one meter, at one delivery point at one of the following approximate voltages, where available:

Single-phase, 120/240 volts; or

3-phase, 208Y/120 volts, 460Y/265 volts, 480Y/277 volts; or

3-phase, 3-wire, 240, 460, 480, 575, or 2300 volts; or

3-phase, 4160Y/2400, 12470Y/7200, or 24940Y/14400 volts; or

3-phase voltages other than those listed above may be available at the Company's option if the size of the Customer's contract warrants a substation solely to serve that Customer, and if the Customer furnishes suitable outdoor space on the premises to accommodate a ground-type transformer installation, or substation, or a transformer vault built in accordance with the Company's specifications.

The type of service supplied will depend upon the voltage available. Prospective customers should determine the available voltage by contacting the nearest office of the Company before purchasing equipment.

Motors of less than 5 H.P. may be single-phase. All motors of more than 5 H.P. must be equipped with starting compensators. The Company reserves the right, when in its opinion the installation would not be detrimental to the service of the Company, to permit other types of motors.

## **BILL DETERMINATION**

The monthly bill under this schedule shall be the sum of the Baseline Charge, Rationing Charge, Incremental Demand Charge, Standby Charge (if applicable), Energy Charge., and Power Factor Charge (if applicable)

Where: Baseline Charge = \$ amount calculated from CBL

Rationing Charge = Sum of [(New Load kWh per hour - Reduced Load kWh per hour) X Hourly Rationing Charge)]

Incremental Demand Charge = Incremental Demand KW X \$.25 per KW

Standby Charge = (see Provision for Customers Operating in Parallel with the Company)

Energy Charge = (a) + (b)

Power Factor Charge = (see Power Factor Adjustment)

#### Where:

- (a) = Sum of [(New Load kWh per hour Reduced Load kWh per hour) X Hourly Energy Charge]
- (b) = Net New Load kWh X .5 Cents per kWh Incentive Margin, but not less than zero.

## **DEFINITIONS**

Customer Baseline Load (CBL): The CBL (kWh per hour) is one full year (365 days) of the individual customer's hourly loads representing the customer's energy use and load pattern on the applicable qualifying rate schedule. The CBL, as agreed to by the Customer and the Company, is used to define the level of kWh in each hour, above which all kWh will be billed at the hourly energy prices described under Schedule HP-X.

Baseline Contract Demand: The maximum monthly billing demand of the CBL.

# SCHEDULE HP-X (SC) (continued)

# **DEFINITIONS** (continued)

New Load: New Load (kWh per hour) is the amount by which actual kWh in any hour exceeds the CBL kWh for the same hour.

Reduced Load: Reduced Load (kWh per hour) is the amount by which actual kWh in any hour is less than the CBL kWh for the same hour.

Net New Load: Net New Load (kWh per month) is the sum of New Load kWh per hour during the month less the sum of Reduced Load kWh per hour during the month.

Incremental Demand: The Incremental Demand for local distribution facilities (KW per month) is the amount by which the maximum integrated 30—minute demand during the month for which the bill is rendered exceeds billing demand used in determining the baseline charge for the same period.

Month: The term "month" as used in the Schedule means the period intervening between readings of electronic pulse data for the purpose of monthly billings. Such data will be collected each month at intervals of approximately thirty (30) days.

Contract Demand: The Company will require contracts to specify a Contract Demand which will be the maximum demand to be delivered under normal conditions.

#### RATE:

Baseline Charge: The Baseline Charge (\$/month) is determined each month by calculating a bill on the current revision of the customer's qualifying rate schedule using Customer Baseline Load for the month to arrive at the appropriate monthly demand and energy amounts. Provisions of the qualifying rate schedule, including Determination of Billing Demand, Adjustment for Fuel Cost, Extra Facilities Charge, Interconnection Facilities Charge, etc. will apply to the bill calculation used to determine the Baseline Charge.

Rationing Charge: The Rationing Charge (¢/kWh) consists of a generation component and/or a transmission component and/or a distribution component and will be determined on an hourly basis during the month. The generation component applies to any hour of the month when low reserve margins for available generation are expected to require the operation of combustion turbines. The transmission and/or distribution component applies to any hour during the billing month when the system demand is expected to exceed 90 percent of the forecasted summer peak demand. The transmission component applies to customers served from the transmission system. Both the transmission and distribution components apply to customers served from the distribution system. If none of the above conditions occur during the month, the Rationing Charge will be zero. The Rationing Charge will be communicated as described in Energy Price Determination.

Incremental Demand Charge: \$ .25 per KW per month

Energy Charge: The Energy Charge (¢/kWh) is the hourly charge equal to expected marginal production cost including line losses, and other directly-related costs. The Energy Charge will be communicated as described in Energy Price Determination.

Incentive Margin: .5¢ per kWh which is applied to Net New Load, but shall not be less than zero.

### **MINIMUM BILL**

The Minimum Bill will be calculated on an annual basis and will be the Baseline Charge, Rationing Charge, Incremental Demand Charge, Standby Charge and Energy Charge summed over the year. The total for the year of CBL Demand Charges plus Standby Charges plus Incremental Demand Charges plus the Incentive Margin applied to Net New Load, shall not be less than the total of \$17.88 per KW per year of Baseline Contract Demand plus \$3.00 per year multiplied by the difference between Contract Demand and Baseline Contract Demand.

# **DETERMINATION OF PRICING PERIODS**

Each hour of the day is a distinct pricing period. The initial pricing period of the day is a one-hour period beginning at 12:00:01 a.m. and ending at 1:00:00 a.m. The last pricing hour of the day begins at 11:00:01 p.m. and ends at 12:00 midnight.

# **ENERGY PRICE DETERMINATION**

Each business day by 4:00 p.m., the hourly Energy Charges, and Rationing Charges, if applicable, for the 24 hours of the following day will be communicated to the Customer. Prices for weekends and Company holidays will be communicated to the Customer by 4:00 p.m. on the last business day before the weekend or holiday. The customer is responsible for notifying the company if he fails to receive the price information.

# PROVISION FOR CUSTOMERS OPERATING IN PARALLEL WITH THE COMPANY

If a customer has power generating facilities operated in parallel with the Company and the Baseline Charge is not calculated under Schedule PG, the Standby Charge, along with the paragraphs, Determination of Standby Charges and Interconnection Facilities Charge shall be applicable to service under this schedule. The Incremental Demand Charge does not apply to any incremental demand that is less than Standby Demand

# PROVISION FOR CUSTOMERS SERVED UNDER RIDER IS

For customers served under Rider IS, the Interruptible Contract Demand shall be the same as that contracted for during the baseline period. Further, the calculation of the Effective Interruptible Demand (EID) each month will exclude all energy consumed above the CBL. The Rationing Charge will not apply to reduced load above Firm Contract Demand during the hours of interruption periods.

# **POWER FACTOR ADJUSTMENT**

The Company will adjust, for power factor, the kWh for any customer operating in parallel, and may adjust the kWh for any other customer served under this schedule. The power factor adjustment may result in a Power Factor Charge, if applicable, as follows:

Power Factor Charge = Sum of Hourly Load Correction Amounts for all hours in the billing period, but not less than zero,

#### Where:

Hourly Load Correction Amount = Hourly Load Correction kWh  $\,$ X Hourly Price Hourly Load Correction kWh = [total hourly kWh  $\,$ X (.85  $\div$  hourly power factor)] – total hourly kWh

#### ADJUSTMENT FOR FUEL COSTS

The Company's Adjustment for Fuel Costs is incorporated as a part of, and will apply to all service supplied under the Schedule, including determination of the Baseline Charge.

## **EXTRA FACILITIES CHARGE**

A monthly "Extra Facilities Charge" equal to 1.7% of the installed cost of extra facilities necessary for service under Schedule HP-X, but not less than \$25, shall be billed to the Customer in addition to the bill under Schedule HP-X described under Bill Determination and any applicable Extra Facilities Charge included in the Baseline Charge.

### MODIFICATIONS OF THE CBL

The CBL will normally represent a full year under the same rate design or structure, and may be reestablished every four years. Modifications to the CBL may be allowed at the option of the Company under certain situations. These situations may include, but are not limited to, the following:

- Adjustments of load patterns associated with annual plant shutdowns, or to smooth random variations in the load pattern, provided the modifications result in revenue neutrality
- One-time permanent modifications to the physical establishment capacity completed prior to initiating service on this schedule
- Adjustments to reflect any Company-sponsored load management program

#### **PAYMENT**

Bills under this Schedule are due and payable on the date of the bill at the office of the Company. Bills are past due and delinquent on the fifteenth day after the date of the bill. If any bill is not so paid, the Company has the right to suspend service. In addition, all bills not paid by the twenty-fifth day after the date of the bill shall be subject to a one and one-half percent (1 1/2%) late payment charge on the unpaid amount. This late payment charge shall be rendered on the following month's bill and it shall become part of and be due and payable with the bill on which it is rendered.

### **CONTRACT PERIOD**

Each Customer shall enter into a contract to purchase electricity under this schedule for a minimum original term of one (1) year, and thereafter from year to year upon the condition that either party can terminate the contract at the end of the original term, or at any time thereafter, by giving at least sixty (60) days previous notice of such termination in writing.

If the Customer requests an amendment to or termination of the agreement before the expiration of the initial term of the agreement, the Customer shall pay to the Company an early termination charge as set forth in the Company's Service Regulations.

South Carolina Sixth (Proposed) Revised Leaf No. 54 Effective PSCSC Docket No. 2005-48-E Order No.